

previously stated, the Commission is providing guidance on acceptable methods of evaluating compliance with the Commission's exposure limits in OET Bulletin No. 65, which has replaced OST Bulletin No. 65.¹²⁵

72. The Commission adopted the 1,000 watts ERP threshold for 2.3 GHz to recognize the flexibility with respect to use, power, location, and other factors that was accorded licensees operating in that band, and determined that this power limit was appropriate to ensure compliance with the Commission's RF exposure standards for most situations.¹²⁶ Moreover, the Commission found the 1,000 watts ERP threshold consistent with its existing rules for transmitters and devices of comparable use and similar operating frequencies. For the same reasons, we propose to adopt the 1,000 watts ERP threshold for operations in the 746-764 MHz and 776-794 MHz bands. Consistent with the modifications the Commission adopted for the 2.3 GHz band, we also propose to modify Sections 1.1307(b), 2.1091, and 2.1093 of the Commission's Rules¹²⁷ to include services and devices applicable to the 746-764 MHz and 776-794 MHz bands. We invite comment on our proposals and any alternatives.

¹²⁵ *Part 27 Report and Order*, 12 FCC Rcd at 10862 (para. 154 n.346). OET Bulletin No. 65 (Edition 97-01) was issued on August 25, 1997. It is available for downloading at the FCC Web Site: www.fcc.gov/oet/rfsafety. Copies of OET Bulletin No. 65 also may be obtained by calling the FCC RF Safety Line at (202) 418-2464.

¹²⁶ *Part 27 Report and Order*, 12 FCC Rcd at 10862 (para. 154 n.345), noting that, in a pending petition for reconsideration of the *RF Guidelines Report and Order*, the Commission was considering whether to revise the threshold for requiring routine evaluation of mobile devices above 1.5 GHz from 1.5 watts to 3 watts. This change was made in the *RF Guidelines Second Reconsideration Order*.

¹²⁷ 47 C.F.R. §§ 1.1307(b), 2.1091, 2.1093.

4. Special Considerations for Use of Channels 65, 66 and 67

73. In the *Public Safety Spectrum Second Notice* on the use of channels 63, 64, 68, & 69 by Public Safety¹²⁸ we sought comment on the potential for interference to GLONASS¹²⁹ and GPS¹³⁰ satellites from public safety systems operating in the 794-806 MHz band (TV channels 68-69).¹³¹ Specifically, we sought comment on the effects of second harmonic transmissions¹³² to GPS and GLONASS receivers from public safety systems operating in this newly allocated band. The second harmonic transmissions of commercial services operating on TV channels 65-67 also fall within the bandwidth identified by NTIA as being used by the GPS (1563.42-1587.42 MHz).¹³³ Therefore, the use of the band 776-794 MHz by commercial services raises many of these same concerns. NTIA recommends that stringent standards be adopted to ensure that equipment that operates in these bands does not cause radio frequency interference to the Global Navigation Satellite System (GNSS)¹³⁴ when used for precision approach and landing. We recognize that this issue will be of critical importance to both navigation and commercial interests and therefore we desire to obtain as complete a record as possible before making a decision. We believe that additional information is needed before we arrive at a final decision with respect to this matter. Therefore, we seek comment on the impact of imposing the out-of-

¹²⁸ See Development of Operational, Technical and Spectrum Requirements For Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010; Establishment of Rules and Requirements of Priority Access Service, WT Docket No. 96-86, Second Notice of Proposed Rulemaking, 12 FCC Rcd 17706 (1997) (*Public Safety Spectrum Second Notice*).

¹²⁹ GLONASS is the Russian Federation Global Orbiting Navigation Satellite System which will use the 1598-1605 MHz portion of the Radionavigation-Satellite Service (space-to-Earth) allocation at 1559-1610 MHz, when the GLONASS system reaches its final frequency configuration after 2005.

¹³⁰ GPS (Global Positioning System) is also in operation, and it will be the United States component of the Global Navigation Satellite System (GNSS). GPS utilizes the lower portion of the Radionavigation-Satellite Service (space-to-Earth) allocation from 1559-1610 MHz on a primary basis, and is maintained by the United States Department of Defense.

¹³¹ See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17778-17779.

¹³² Radio transmitters produce energy not only on the desired frequency (such as 794 MHz) but also lesser amounts of energy on multiples of the desired frequency, known as harmonics. In this example, the second harmonic (twice the desired frequency) would be 1588 MHz. Although most of the power generated is on the desired frequency, very sensitive receivers can detect the smaller amounts of power generated on the harmonic frequencies.

¹³³ See letter from William T. Hatch, Acting Associate Administrator, Office of Spectrum Management, NTIA, to Chief, Office of Engineering and Technology, FCC, May 11, 1999.

¹³⁴ GNSS as currently envisioned will consist of the GPS and GLONASS systems that provide radionavigation satellite services worldwide.

band emission limits recommended by NTIA on the design of commercial equipment for use in the 776-794 MHz band.

74. Specifically, in its May 11, 1999 letter¹³⁵ NTIA notes that the protection of spectrum used to support the GNSS is consistent with the U.S. commitment to the "continuous availability of GPS" announced in the Presidential Decision Directive of March 29, 1996, and enacted by Congress in the Defense Authorization Act of 1998.¹³⁶ NTIA also notes that Congress further directed the Administration to "protect the integrity of the Global Positioning System frequency spectrum against interference and disruption" in the Defense FY99 Appropriations Conference Report,¹³⁷ and in the Commercial Space Act of 1998.¹³⁸

75. To protect these systems NTIA specifically advocates that out-of-band emissions be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband emissions and -80 dBW/700 Hz for narrowband emissions¹³⁹, and that these limits be applied to all spurious emissions, including second harmonics in the 1559-1610 MHz range. These limits are based on international recommendations by RTCA and ETSI for mobile earth terminals in the Mobile Satellite Service (MSS).¹⁴⁰ Additionally, we note that potential full power broadcast use of this spectrum could pose additional difficulties for the GNSS system. Because conventional full power broadcast stations would operate at powers several orders of magnitude larger than those used by commercial fixed and mobile stations, additional attenuation of out-of-band emissions may be required to protect the GNSS systems. NTIA has recommended, in this case, that an emission limit of -110 dB below the average transmitter power should be included as the

¹³⁵ NTIA's submission is exempt from the *ex parte* rules otherwise applicable to submissions received after Commission issuance of a Sunshine Agenda. See Section 1.1204(a)(5) of the Commission's Rules, 47 C.F.R. § 1.1204(a)(5).

¹³⁶ National Defense Authorization Act for Fiscal Year 1998 (Pub. L. 105-85, Nov. 18, 1997, 111 Stat. 1629).

¹³⁷ H.R. Conf. Rep. 105-746, 105th Cong., 2d Sess. 1998.

¹³⁸ Commercial Space Act of 1998 (Pub. L. 105-303, Oct. 28, 1998, 112 Stat. 2843).

¹³⁹ For purposes of NTIA's analysis, wideband interference was considered to have a bandwidth in the range of 100 kHz to 1 MHz; narrowband interference was considered to have a bandwidth less than or equal to 700 Hz.

¹⁴⁰ See RTCA Inc. Special Committee 159, Assessment of Radio Frequency Interference Relevant to the GNSS, Document No. RTCA/DO-235, January 27, 1997. The RTCA report contained two appendices – one was endorsed by the aviation community and the other by the MSS community. The MSS community arrived at a value that was less stringent (*i.e.*, -54 dBW/MHz) than that arrived at by the aviation community with respect to protection of GLONASS. See also, European Testing and Standards Institute (ETSI) standards TBR-041 and TBR-042 for Mobile Earth Terminals in the 1.6/2.4 GHz and 2.0 GHz range, respectively.

proposed unwanted emission limit, including harmonics, for DTV transmitters operating in the 746-764 MHz and 776-794 MHz bands. NTIA notes that the current DTV mask requires that emissions, including harmonics that are more than 6 MHz from the channel edge, must be attenuated by this amount. It believes that this value is consistent with the current harmonic suppression levels that can be achieved by television transmitters and will protect GNSS precision approach landing operations.

76. The Commission is committed to ensuring that the GNSS is protected adequately against interference. We note that the standard recommended by NTIA is necessary only to protect the GNSS band at 1559-1605 MHz. Based on the information before us at this time, we tentatively propose to adopt the NTIA recommended emissions limits,¹⁴¹ but to apply them only to emissions that fall within the GNSS band. Outside the 1559-1605 MHz GNSS band, we propose that the standard addressed earlier in the section on out-of-band spurious emissions (*i.e.*, $43 + 10 \log P$) would apply. We believe that it is imperative that all parties fully understand the need for and ramifications of the NTIA proposed standard on use of the 700 MHz band for commercial wireless services. Therefore, we request comment on the standard recommended by NTIA to protect GNSS operations. We also invite comment as to whether extenuating conditions such as low antenna height, propagation losses, body suppression of signals, and wall attenuation should be taken into account in calculating the out-of-band emission requirements. In addition, we are interested in obtaining a better understanding of the levels of radio energy that currently exist in the GNSS spectrum as a result of spurious emissions from other communications systems and electronic equipment. This information will enable us to determine whether stringent limits for commercial equipment are necessary and likely to be effective in accomplishing the desired objective.

77. We observe that stringent out-of-band emissions limits are generally more difficult to meet for mobile and hand-held transmitters than for base and control stations or for fixed service stations. Typical operation of mobile units in the cellular and broadband PCS services, for example, are required to suppress out-of-band emissions by approximately 50 dB below the transmitter carrier signal.¹⁴² The standard recommended by NTIA would require approximately

¹⁴¹ We propose, however, to adopt an absolute limit of -80 dBW on the e.i.r.p. of discrete emissions of less than 700 Hz bandwidth, rather than a limit on narrowband spectral power density. See Amendment of Parts 2 and 25 to Implement the Global Mobile Personal Communications by Satellite (GMPCS) Memorandum of Understanding and Arrangements; Petition of the National Telecommunications and Information Administration to Amend Part 25 of the Commission's Rules to Establish Limits for Mobile and Portable Earth Stations Operating in the 1610-1660.5 MHz Band, ____, FCC 99-37, para. 78, released March 5, 1999 (*GMPCS Notice*).

¹⁴² Cellular rules require that out-of-band emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice, or more than twice, the fundamental frequency by $43 + 10 \log (P)$ dB. Broadband PCS emissions must be attenuated by at least $43 + 10 \log (P)$ dB on any frequency outside the licensee's frequency block. This gives a value of 47.8 dB attenuation for 3 watt mobiles. See Sections 22.917 and 24.238 of the Commission's Rules, 47 C.F.R. §§ 22.917 and 24.238.

85-90 dB suppression for typical full-power mobile equipment and approximately 75-80 dB for handhelds and portables.¹⁴³ We are very much concerned about whether the proposed emissions standard would severely curtail the availability of the 36 megahertz of spectrum designated by Congress for commercial use. Specifically, we request factual data and technical information as to the impact this proposal may have on the use of the 700 MHz band for commercial wireless services. We also seek information on how the proposal may affect the equipment cost, size, weight and battery life of handheld or portable equipment. We are aware that Global Mobile Personal Communications via Satellite (GMPCS) terminals have been proposed to meet the same standard we have proposed herein.¹⁴⁴ We invite comment as to whether it is feasible for commercial fixed and mobile equipment to meet the same standards as these commercial mobile satellite systems. We solicit suggestions as to any and all alternative approaches or measures that the Commission can take to alleviate the impact of the proposed standard. For example, we invite comment as to whether there may be a way to restrict mobile use near airports. We also seek comment on whether a transition plan to more stringent levels would be appropriate to protect the future GNSS.

78. In summary, we request comment on the risk of harmonic interference to GPS-assisted landings from systems licensed under the rules proposed in this Notice, and whether the emissions limits noted above that have been recommended by NTIA would provide the necessary protection for GNSS systems from anticipated commercial fixed and mobile operations in these bands. We also request specific comment on how to address potential full power broadcast use of this spectrum, and whether the limits proposed by NTIA would be a serious burden on the use of this spectrum for full power broadcasting.¹⁴⁵

E. Competitive Bidding

1. Statutory Requirements

79. Pursuant to Section 3004 of the Balanced Budget Act of 1997, codified as Section 337 of the Communications Act, the licenses for this proposed commercial spectrum are required to be granted through competitive bidding. Section 337(a)(2) directs how the commercial segment of the spectrum between 746 megahertz and 806 megahertz is to be assigned: "36

¹⁴³ For the purposes of the GLONASS standard, we have assumed the narrowband limit of -80 dBW as sufficient for commercial services bandwidths of up to 150 kHz.

¹⁴⁴ See *GMPCS Notice*. Section 25.213 (b) of the Commission's Rules, 47 C.F.R. § 25.213 (b), requires that MSS equipment operating in 1610-1626.5 MHz meet essentially these levels within the band 1574.397 - 1576.443 MHz.

¹⁴⁵ In this regard, we note that the Commission also has before it a waiver request filed March 3, 1999 by Harris Corporation, seeking relaxation of the 110 dB attenuation requirement in adjacent bands while continuing to protect the GPS bands.

megahertz of that spectrum for commercial use [is] to be assigned by competitive bidding pursuant to section 309(j)."¹⁴⁶ Section 337(b)(2) further directs the Commission to "commence competitive bidding for the commercial licenses created pursuant to subsection (a) after January 1, 2001."¹⁴⁷ The proposed commercial spectrum therefore is not to be licensed for the following purposes, which are excluded from the scope of our spectrum auction authority by Section 3002 of the Balanced Budget Act of 1997: (1) public safety radio services licenses, including (a) private internal radio services used by State and local government entities; and (b) emergency road services provided by not-for-profit organizations; (2) digital television service licenses to be provided by terrestrial broadcast licensees to replace their analog service licenses; or (3) non-commercial educational broadcast stations or public broadcast stations.¹⁴⁸

80. Although this spectrum is dedicated by statute for commercial rather than public safety licenses, consistent with the statutory mandate in Section 337, there still is the possibility, under our proposed application of the Part 27 rules to this spectrum, that public safety entities could successfully bid for and be licensed to use the spectrum. We are concerned that the Balanced Budget Act of 1997 might: (1) preclude us from licensing a public safety entity that participated in an auction of commercial spectrum; or (2) nullify or otherwise adversely affect our authority to license the spectrum involved through competitive bidding, if public safety entities participate in such an auction. We determined in our *LMS Reconsideration Order* that Congress did not intend that individual license applicants, by asserting their interest in providing public safety services, could nullify a previous Commission determination that specific spectrum allocations were auctionable, noting that this would undermine Commission auction authority under the Budget Act.¹⁴⁹ In the present context, where the affected spectrum has been allocated and designated in response to the mandate of Section 337 of the Act, such an interpretation would also run directly counter to the explicit statutory direction to auction these 36 megahertz for commercial use.

81. Our determination that public safety applicants lack the power to unilaterally overturn Commission decisions respecting the auctionability of spectrum bands, however, did not require us to address the issue of whether public safety entities are prohibited from participation as bidders in an auction process. Our view is that such participation, subject to the same bidding and service rules applicable to commercial applicants, cannot compromise the Commission's

¹⁴⁶ 47 U.S.C. § 337(a)(2).

¹⁴⁷ 47 U.S.C. § 337(b)(2).

¹⁴⁸ See Section 3002(a) of the Balanced Budget Act of 1997, amending Sections 309(j)(1) and 309(j)(2) of the Communications Act, 47 U.S.C. §§ 309(j)(1), 309(j)(2).

¹⁴⁹ Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, Order on Reconsideration of the Second Report and Order, FCC 99-3 (paras. 8-10), released Jan. 21, 1999 (*LMS Reconsideration Order*), 1999 WL 22950.

auction authority where, as here, that authority has been directly conferred by statute. We are considering in a separate proceeding the broader issue of exemption from our general auction authority of some public safety services.¹⁵⁰ In light of the importance attached by the Congress to ensuring the availability of reallocated spectrum to public safety uses, however, we believe these commercial bands should be open to application by any public safety entities that are qualified and prepared to bid under the same rules applied to commercial applicants. We believe this interpretation permits license applicants who intend to use commercial spectrum for public safety services to participate in auctions, at least for spectrum in the 746-764 MHz and 776-794 MHz bands, and that such participation would not be inconsistent with the Congressional mandate for the Commission's exercise of auction authority in this context. We therefore request comment on what effect the changes in Commission auction authority, made by the Balanced Budget Act of 1997, have on the possible participation of public safety entities in an auction of commercial spectrum, and on their eligibility to obtain a license through the subsequent acquisition of spectrum that was initially assigned by auction.

82. Section 3002 of the Balanced Budget Act¹⁵¹ also directs the Commission to provide for the "design and conduct (for purposes of testing) of competitive bidding using a contingent combinatorial bidding system that permits prospective bidders to bid on combinations or groups of licenses in a single bid and to enter multiple alternative bids within a single bidding round." The Commission has contracted for the development of such procedures.¹⁵² We seek comment on whether the auction of these spectrum bands, especially if our service rules provide for broadcast services, may present a suitable context for combinatorial procedures. We ask that commenters consider: (a) whether, absent the application of combinatorial rules, the existing standardized auction rules in Part 1 are adequate for the juxtaposition of broadcast and wireless bidding entities; or (b) whether modifications of standardized Part 1 auction rules, to facilitate participation by entities interested in providing broadcast service, are desirable. We especially seek comment on how, absent combinatorial rules, our auction methodology should recognize the divergence between geographic licensing applied to wireless spectrum bands, and the focus on individual communities of license in the assignment of broadcast spectrum.

¹⁵⁰ *Balanced Budget Notice*, *supra* n. 25.

¹⁵¹ Codified as 47 U.S.C. § 309(j)(3).

¹⁵² *Part 1 Third Report and Order*, 13 FCC Rcd at 453 (para. 137); *see also* Wireless Bureau Begins Process of Designing a Combinatorial Bidding System for Future Commission Auctions, News Report No. WT 98-35 (rel. Sept. 28, 1998).

2. Incorporation by Reference of Part 1 Standardized Auction Rules

83. In the *Part 1 Third Report and Order*, the Commission streamlined its auction procedures by adopting general competitive bidding rules applicable to all auctionable services¹⁵³ and, in the same proceeding, issued a *Part 1 Second Further Notice* concerning designated entities and attribution rules, among other issues.¹⁵⁴ We propose to conduct the auction for initial licenses in the 746-764 MHz and 776-794 MHz bands in conformity with the general competitive bidding rules set forth in Part 1, Subpart Q of the Commission's Rules, and substantially consistent with the bidding procedures that have been employed in previous Commission auctions. Specifically, we propose to employ the Part 1 rules governing designated entities, application issues, payment issues, competitive bidding design, procedure and timing issues, and anti-collusion. These rules would be subject to any modifications that the Commission adopts in relation to the *Second Further Notice*, or in response to pending petitions for reconsideration of the *Part 1 Third Report and Order*. We seek comment on this proposal, and on whether any of our Part 1 Rules would be inappropriate in an auction for these spectrum blocks, especially with respect to possible inclusion of broadcast services in our auction methodology.

3. Provisions for Designated Entities

a. Background

84. The Communications Act provides that, in developing competitive bidding procedures, the Commission shall consider various statutory objectives and consider several alternative methods for achieving them.¹⁵⁵ Specifically, the statute provides that, in establishing eligibility criteria and bidding methodologies, the Commission shall:¹⁵⁶

promot[e] economic opportunity and competition and ensur[e] that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women.

¹⁵³ *Part 1 Third Report and Order*, 13 FCC Rcd at 374-470 (paras. 4-169).

¹⁵⁴ *Id.* at 471-82 (paras. 170-195).

¹⁵⁵ See 47 U.S.C. §§ 309(j)(3), 309(j)(4).

¹⁵⁶ 47 U.S.C. § 309(j)(3)(B).

b. Small Business Definitions

85. In the *Competitive Bidding Second Memorandum Opinion and Order*, the Commission stated that it would define eligibility requirements for small businesses on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold.¹⁵⁷ The *Part 1 Third Report and Order*, while it standardizes many auction rules, provides that the Commission will continue a service-by-service approach to defining small businesses. For the 36 megahertz of commercial spectrum, we propose to adopt the definitions the Commission adopted for broadband PCS for small and very small businesses,¹⁵⁸ which the Commission also adopted for 2.3 GHz and 39 GHz applicants.¹⁵⁹ We tentatively conclude that the capital requirements are likely to be similar to the capital requirements in those services. Specifically, we propose to define a small business as any firm with average annual gross revenues for the three preceding years not in excess of \$40 million.

86. We observe that the capital costs of operational facilities in the 746-764 MHz and 776-794 MHz bands are likely to vary widely based on the services provided. Accordingly, we seek to adopt small business size standards that afford licensees the greatest flexibility. Thus, in addition to our proposal to adopt the general small business standard the Commission used in the case of broadband PCS, 2.3 GHz, and 39 GHz licenses, we propose to adopt the definition for very small businesses used for 39 GHz licenses and for the PCS F Block licenses, namely, businesses with average annual gross revenues for the three preceding years not in excess of \$15 million.

87. We seek comment on the use of these standards for services licensed in the 36 megahertz of commercial spectrum, with particular focus on the appropriate definitions of small and very small businesses as they relate to the size of the geographic area to be covered and the spectrum allocated to each license. For the proposed definitions of small business and very small business, we propose to include the entity's affiliates and controlling interests when determining

¹⁵⁷ Implementation of Section 309(j) of the Communications Act – Competitive Bidding, PP Docket No. 93-253, Second Memorandum Opinion and Order, 9 FCC Rcd 7245, 7269 (para. 145) (1994) (*Competitive Bidding Second Memorandum Opinion and Order*).

¹⁵⁸ Implementation of Section 309(j) of the Communications Act – Competitive Bidding, PP Docket No. 93-253, Fifth Memorandum Opinion and Order, 10 FCC Rcd 403 (1994).

¹⁵⁹ Sections 27.210(b)(1), 27.210(b)(2), and 101.1209(b)(1)(i) of the Commission's Rules, 47 C.F.R. §§ 27.210(b)(1), 27.210(b)(2), 101.1209(b)(1)(i).

eligibility by gross revenue criteria.¹⁶⁰ In discussing these issues, commenters are requested to address the expected capital requirements for services in the 746-764 MHz and 776-794 MHz bands. Commenters also are invited to use comparisons with other services for which the Commission has already established auction procedures as a basis for their comments regarding the appropriate definitions for small and very small businesses. We also seek comment on whether the proposed designated entity provisions, if adopted and applied to the services in these bands, would be sufficient to promote participation by businesses owned by minorities and by women, and participation by rural telephone companies. To the extent that commenters propose additional provisions to ensure participation by minority-owned and women-owned businesses, we also invite them to address how such provisions should be crafted to meet the relevant standards of judicial review.¹⁶¹ In all other respects, we propose to apply the competitive bidding procedures that the Commission adopted in the *Part 1 Third Report and Order*, subject to any modifications the Commission adopts in response to the *Second Further Notice* and pending petitions for reconsideration of the *Part 1 Third Report and Order*.¹⁶²

III. PROTECTION OF TELEVISION SERVICES

A. Background

88. We discuss in this section technical requirements for protecting incumbent broadcast licensees and planned DTV allotments against interference. In the *DTV Sixth Report and Order*,¹⁶³ we stated that all analog TV and DTV operations in the 746-806 MHz band would be fully protected during the DTV transition period. In the *Reallocation Notice*¹⁶⁴ we noted that new licensees in the band will have to protect both analog TV and DTV operations from interference. The Commission subsequently addressed the protection of TV and DTV operations in the 764-776 MHz and 794-806 MHz Public Safety bands (the 700 MHz band) in the *Public*

¹⁶⁰ See, e.g., Section 80.1252 of the Commission's Rules, 47 C.F.R. § 80.1252 (designated entities in the coast station service). Section 1.2110(b) of the Commission's Rules, 47 C.F.R. § 1.2110(b), describes affiliate and controlling interest relationships in the designated entity context generally.

¹⁶¹ See *Adarand Constructors v. Peña*, 515 U.S. 200 (1995); *United States v. Virginia*, 518 U.S. 515 (1996).

¹⁶² See *Part 1 Third Report and Order*, 13 FCC Rcd at 386-409 (paras. 13-57).

¹⁶³ See *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Docket No. 87-268, Sixth Report and Order, 12 FCC Rcd 14588, 14626-27 (para. 80)(1997)(*DTV Sixth Report and Order*).

¹⁶⁴ *Reallocation of Television Channels 60-69, the 746-806 MHz Band*, ET Docket No. 97-157, Notice of Proposed Rule Making, 12 FCC Rcd 14141, 14148 (para. 17)(1997)(*Reallocation Notice*).

Safety Spectrum Report and Order, which adopted service rules for public safety uses of this spectrum.¹⁶⁵

89. In reaching its decisions in that proceeding, the Commission noted that land mobile and TV stations have successfully shared the 470-512 MHz band (TV channels 14-20) in 11 major metropolitan areas of the United States.¹⁶⁶ In the 470-512 MHz band, the Commission relied on minimum separation distances based on the various heights and powers of the land mobile stations to prevent harmful interference.¹⁶⁷ Since this method has been successful, the Commission decided to continue to administer protection criteria for these services in the 700 MHz band in this same manner. In making that determination, the Commission examined the previous methodology with consideration of the more recent technological changes, the physical characteristics of the 700 MHz band, and the goals Congress established in the Balanced Budget Act of 1997.¹⁶⁸

90. We tentatively conclude that the factors and considerations examined in the *Public Safety Spectrum Report and Order* are equally relevant here, at least with respect to the use of the 746-764 MHz and 776-794 MHz bands for commercial mobile services.¹⁶⁹ We therefore propose to adopt the same criteria to protect TV and DTV operations from commercial mobile operations that were adopted in the *Public Safety Spectrum Report and Order*.¹⁷⁰ We recognize that there is a greater flexibility of use being proposed for the commercial spectrum at issue here that would allow both fixed and broadcasting services, in addition to mobile services. We tentatively conclude that the sharing criteria applicable to mobile service base stations would be sufficient to protect TV and DTV operations from fixed service operations also, but seek comment on this tentative conclusion. With respect to protection of TV and DTV operations

¹⁶⁵ See *Public Safety Spectrum Report and Order* at paras. 146-164.

¹⁶⁶ *Public Safety Spectrum Report and Order*, at para. 148.

¹⁶⁷ See *Further Sharing of the UHF Television Band by Private Land Mobile Radio Services*, General Docket No. 85-172, Notice of Proposed Rulemaking, 101 FCC 2d 852, 865 (1985), *proceeding suspended*, 2 FCC Rcd 6441 (1987).

¹⁶⁸ *Public Safety Spectrum Report and Order* at paras. 150-164.

¹⁶⁹ This would include consideration of TV stations outside of this spectrum, *i.e.*, on Channel 59. The adjacent channel protection criteria established herein would apply equally to Channel 59 stations, and new licensees in the Channel 60 spectrum block will need to recognize the existence of such adjacent channel use in designing their systems and services. Moreover, use of Channel 59 may change as DTV service is relocated to the core channels. Any interference or protection criteria involving different uses of Channel 59 would necessarily be established in a later proceeding.

¹⁷⁰ To the extent that our pending reconsideration of that Order results in subsequent changes to the rules adopted in that proceeding, those changes may need to be reflected as they apply or are relevant here.

from new broadcast operations on these frequencies, however, the *Public Safety Spectrum Report and Order* provides no guidance, since new broadcasting stations and services are not permitted on the public safety frequencies. A different approach or criteria may therefore be appropriate depending on the types of broadcasting services permitted or provided.

B. Protection of TV Stations

91. The *Public Safety Spectrum Second Notice* proposed a 40 dB desired to undesired (D/U) signal ratio for co-channel operations and a 0 dB D/U signal ratio for adjacent channel operations to determine the geographic separation needed between public safety base stations and the Grade B service contours of co-channel and adjacent channel TV stations.¹⁷¹ Based on its review of the record, the Commission concluded in the *Public Safety Spectrum Report and Order* that the use of a 40 dB signal ratio for co-channel operations and a 0 dB signal ratio for adjacent channel operations was supported by our experience with using this standard to protect TV service from interference from land mobile operations in the New York metropolitan area without serious adverse consequences, and that we would, therefore, adopt such standards for calculating geographic separation requirements.¹⁷²

92. The Commission concluded that the 40 dB D/U signal ratio is a reasonable value that will provide sufficient TV protection, as prescribed by the Balanced Budget Act of 1997.¹⁷³ Co-channel land mobile base station transmitters would be limited to producing a maximum signal strength at the hypothetical TV Grade B contour 40 dB below 64 dBu, or 24 dBu.¹⁷⁴ The Commission also adopted a 0 dB D/U signal ratio for adjacent channel operations.¹⁷⁵ Adjacent channel land mobile transmitters would be limited to a maximum signal that can equal the TV Grade B signal of 64 dBu at the TV station Grade B contour, defined here as 87.7 km (55 miles).¹⁷⁶ A typical TV receiver's adjacent channel rejection is at least 10-20 dB, which would further safeguard TV from land mobile interference. We tentatively conclude that the

¹⁷¹ See Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Establishment of Rules and Requirements for Priority Access Service, WT Docket No. 96-86, Second Notice of Proposed Rulemaking, 12 FCC Rcd 17706, 17803 (1997) (*Public Safety Spectrum Second Notice*).

¹⁷² *Public Safety Spectrum Report and Order* at paras. 161-62.

¹⁷³ See 47 U.S.C. § 337(d).

¹⁷⁴ If other factors are held constant, a 40 dB D/U ratio rather than a 50 dB D/U ratio allows base stations to be located approximately 48.3 km (30 mi) closer to a co-channel TV station. See Section 90.309, Tables A & B, of the Commission's Rules, 47 C.F.R. § 90.309, Tables A & B.

¹⁷⁵ *Public Safety Spectrum Report and Order* at para. 152.

¹⁷⁶ See 47 C.F.R. § 73.610.

same criteria should be applied to commercial mobile and fixed operations in the 746-764 MHz and 776-794 MHz bands. We thus propose to adopt rules similar to those reflected in Section 90.545 of the Commission's Rules,¹⁷⁷ as adopted in the *Public Safety Spectrum Report and Order*, with the following proposed modification. Because we are not proposing any specific antenna height or transmitter power limitations for Part 27 licensees, Part 27 licensees who propose to operate stations with antenna heights or transmitter powers that exceed those specified in Section 90.545(b) must provide to the Commission for approval a detailed technical analysis demonstrating that the required interference protection criteria are met prior to placing such stations into operation. We recognize that fixed operations can often be engineered to avoid causing interference even at relatively close distances. Accordingly, we invite comment as to the appropriate criteria that should be used to protect TV broadcasting against interference from fixed operations.

C. Protection of DTV Stations

93. In the *Public Safety Spectrum Second Notice*, the Commission noted that its proposals were based on protecting analog TV, and asked for comments on the appropriate D/U signal ratios that should be applied to protect DTV.¹⁷⁸ In doing so, the Commission stated that DTV transmissions could exhibit a greater resistance to interference than analog transmissions and therefore DTV stations may be able to accept a lesser standard of protection.¹⁷⁹ After examining the record, the Commission decided to apply similar criteria adopted in the *Public Safety Spectrum Report and Order* for protecting reception of analog TV stations to protecting DTV reception.¹⁸⁰ Since the Commission allocated DTV channels to replicate existing TV station service areas,¹⁸¹ it allowed public safety stations to provide the same field strength at the equivalent Grade B contour of the DTV station as they do for an analog TV station, and adjust the D/U ratio accordingly. The Commission therefore provided for a TV station to have protection ratios of 40 dB for co-channel and 0 dB for adjacent channel at its 64 dBμ field strength contour. The equivalent ratios for a DTV station that has a Grade B signal strength contour of 41 dBμ are 17 dB and -23 dB, respectively.

¹⁷⁷ 47 C.F.R. § 90.545.

¹⁷⁸ *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17803-04 (paras. 232-239).

¹⁷⁹ *Id.* at 17803-04 (para. 235).

¹⁸⁰ *Public Safety Spectrum Report and Order* at para. 155. A TV station's hypothetical Grade B contour is plotted based on a 64 dBμ signal strength using the F(50,50) curve. See Section 73.699 of the Commission's Rules, 47 C.F.R. § 73.699. A DTV station's equivalent contour is based on a 41 dBμ signal strength using the F(50,90) curve. See Section 73.625 of the Commission's Rules, 47 C.F.R. § 73.625.

¹⁸¹ See *DTV Sixth Report and Order*, 12 FCC Rcd 14681-82 (para. 206).

94. In making this determination, the Commission noted that in the *DTV Sixth Report and Order* the Commission specified a minimum geographic separation of 250 kilometers (155 miles) for co-channel operations between DTV stations and the city-center in the areas where there are existing land mobile operations.¹⁸² Section 90.305(a) of the Commission's Rules provides that maximum facility land mobile base stations can be located up to 80.5 km (50 mi) from the city-center of one of the specified cities.¹⁸³ Consequently, under the geographic separation adopted in the *DTV Sixth Report and Order*, a maximum facility land mobile base station could choose to locate its station as close as 169.5 km (250 km - 80.5 km), or 105 mi. At this distance, the land mobile base station would provide a co-channel signal at the DTV station's 88.5 km (55 mi) equivalent Grade B contour that would provide less than a 40 dB D/U protection ratio to a DTV receiver. Thus, our decision to require 700 MHz land mobile systems to provide signal ratios for DTV stations that will allow approximately the same separation distance as we did for analog TV stations represented a reasonable balance between the needs of both DTV stations and public safety entities.

95. We tentatively conclude that the same criteria should be applied to commercial mobile and fixed operations in the 746-764 MHz and 776-794 MHz bands. We thus propose to adopt rules similar to those reflected in Section 90.545 of the Commission's Rules,¹⁸⁴ as adopted in the *Public Safety Spectrum Report and Order*, with the following proposed modification. As we have proposed for the protection of analog TV stations above,¹⁸⁵ Part 27 licensees who propose to operate stations with antenna heights or transmitter powers that exceed those specified in Section 90.545(b) must provide to the Commission for approval a detailed technical analysis demonstrating that the required interference protection criteria are met prior to placing such stations into operation.

D. TV Protected Service Contour Alternatives

96. In the *Public Safety Spectrum Second Notice*, the Commission raised the issue of whether to protect TV reception based on a geographic separation table or to use a case-by-case approach and protect TV stations based on their actual Grade B contour. The Commission listed two possible approaches for specifying the TV protected Grade B service contour: (1) use a standard 88.5 km (55 mi) Grade B service contour, as we did previously; or (2) use the

¹⁸² See *DTV Sixth Report and Order*, 12 FCC Rcd at 14663-64 (paras. 163-164). See also Section 90.303(a) of the Commission's Rules, 47 C.F.R. § 90.303(a), for the areas where TV/land mobile sharing is currently permitted.

¹⁸³ See 47 C.F.R. § 90.305(a).

¹⁸⁴ 47 C.F.R. § 90.545.

¹⁸⁵ See para. 92, *supra*.

individual Grade B service contour based on the actual parameters of the TV license.¹⁸⁶ Under the first approach, the minimum separation distances could be displayed in a table, thus simplifying communication system planning. This approach would also give broadcasters who are operating at less than the "standard" parameters some flexibility to modify their facilities during the transition period without raising interference concerns. The Commission noted, however, that in the event of a less than maximum antenna height and full power station, the use of a standard Grade B service contour and geographic separation tables could unnecessarily inhibit public safety use of the spectrum by prohibiting stations that meet the D/U signal ratio requirement at the predicted Grade B field strength contour.¹⁸⁷ To address this concern, the Commission discussed an alternative that bases protection on the actual operating parameters of a TV station (e.g., it provides more of a case-by-case approach to examining interference).¹⁸⁸ Finally, the Commission discussed an additional option of permitting new licensees in this spectrum to reach agreements with licensees of protected TV stations that would be located closer than that permitted under the geographic separation requirements.¹⁸⁹

97. In the *Public Safety Spectrum Report and Order* the Commission concurred with the comments that a geographic separation distance table based on a standard 88.5 km Grade B service contour (equivalent Grade B for DTV) would be the most convenient form.¹⁹⁰ The Commission remained concerned, however, that limiting TV/land mobile separation to distances specified in a table may prevent public safety entities from fully utilizing the spectrum in a number of major metropolitan areas until after the transition period ends. The Commission believed that it was necessary to provide alternative methods that will give flexibility to public safety entities to locate base stations closer than the distance specified in the separation table without causing excessive interference to TV/DTV stations.¹⁹¹ Therefore, the Commission concluded that public safety applicants should be allowed to submit engineering studies showing how they propose to meet the appropriate D/U signal ratio at the existing TV station's authorized or applied for Grade B service contour or equivalent contour for DTV stations instead of the

¹⁸⁶ See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17802-04 (paras. 232-239). The TV Grade B service contour is where the D/U signal ratio is applied. Thus, to determine the minimum geographic separation needed between public safety base stations and TV stations you add the two distances together (the distance of the public safety base station to the contour that meets the appropriate D/U signal ratio and the distance of the Grade B service contour from the TV station).

¹⁸⁷ See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17802-04 (paras. 233-237).

¹⁸⁸ See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17804-05 (paras. 238-239).

¹⁸⁹ See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17805 (para. 240).

¹⁹⁰ *Public Safety Spectrum Report and Order* at para. 158.

¹⁹¹ *Id.*

hypothetical contour at 88.5 km.¹⁹² This would permit public safety applicants to take into account intervening terrain and engineering techniques such as directional and down-tilt antennas in determining the necessary separation to provide the required protection. Public safety applicants who used the engineering techniques must, however, consider the actual TV/DTV parameters and not base their study on the 88.5 km hypothetical or equivalent Grade B contour.¹⁹³ Finally, public safety applicants would also be allowed to "short space" (*i.e.*, locate closer than the Table permits) if they obtain the approval of the TV stations they are required to protect.¹⁹⁴ Thus, under the rules adopted by the Commission, public safety applicants could select one of three ways to meet the TV/DTV protection requirements: (1) utilize the geographic separation specified in the Table; (2) submit an engineering study to justify other separations, which is subject to Commission approval; or (3) obtain concurrence from any applicable TV/DTV station. We propose that these same alternatives be available to Part 27 licensees and we seek comment on this approach.

98. Also, in the *Public Safety Spectrum Second Notice* the Commission requested comment on whether the size of the reference TV contour should be increased because some TV stations have facilities exceeding those upon which the 88.5 km (55 mi) contour was based.¹⁹⁵ The Commission stated that a TV station with parameters of 5 megawatts with an antenna height above average terrain (HAAT) of 610 meters could have a Grade B contour distance of 107 km (66.5 mi).¹⁹⁶ In order to protect certain TV/DTV stations, which have extremely large contours due to unusual height situations, the Commission incorporated an additional factor that must be used by all public safety base, control, and mobile stations to protect these few TV/DTV stations and afford the land mobile stations the necessary protection from the TV/DTV stations.¹⁹⁷ We propose that this additional factor also be applicable to all Part 27 licensees operating in these bands. We thus propose to adopt a rule similar to that reflected in Section 90.545(c)(2)(iii) of the Commission's Rules,¹⁹⁸ as adopted in the *Public Safety Spectrum Report and Order*, to address this situation.

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ See *Public Safety Spectrum Second Notice*, 12 FCC Rcd at 17804 (para. 238).

¹⁹⁶ *Id.* (para. 236 n405). See 47 C.F.R. §§ 73.683-73.684.

¹⁹⁷ *Public Safety Spectrum Report and Order* at para. 159.

¹⁹⁸ 47 C.F.R. § 90.545.

E. Other Issues

99. In the *DTV Sixth Report and Order*, the Commission raised the possibility that, in negotiating among themselves for changes in allotments and assignments, TV licensees could include agreements for compensation.¹⁹⁹ We propose to permit new licensees in this spectrum similarly to reach agreements with licensees of protected TV stations, including holders of construction permits, compensating them for converting to DTV transmission only before the end of the DTV transition period, accepting higher levels of interference than those allowed by the protection standards, or otherwise accommodating new licensees in these bands. We believe that these measures would benefit the public by accelerating the transition to DTV and clearing the 746-806 MHz band for other new services.

100. Finally, because we have proposed to license this spectrum for broadcasting, as well as for the fixed and mobile uses, we also request comment on interference protection standards for any new broadcast operations that may be licensed in this spectrum.²⁰⁰ We further request comment on whether we should establish geographic separations standards for any TV broadcasting in this spectrum, authorized pursuant to this or a successor rulemaking proceeding, from current analog TV or new DTV stations authorized before this proceeding, whether we should treat any broadcast licenses on a case-by-case basis; or whether there are other approaches we should use to consider interference to and from broadcast operations.

IV. PROCEDURAL MATTERS

A. Initial Regulatory Flexibility Analysis

101. As required by Section 603 of the Regulatory Flexibility Act of 1980 (RFA),²⁰¹ the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules proposed in this Notice. We request written public comment on the analysis. In order to fulfill the mandate of the Contract with America Advancement Act of 1996 regarding the Final Regulatory Flexibility Analysis, we ask a number of questions in our IRFA regarding the prevalence of small businesses in the affected industries. Comments must be filed in accordance with the same filing

¹⁹⁹ *DTV Sixth Report and Order*, 12 FCC Rcd at 14667 (para. 172).

²⁰⁰ Stations transmitting broadcast signals are likely to produce interference effects to analog TV and DTV stations that differ from those of land mobile or fixed stations.

²⁰¹ 5 U.S.C. § 603.

deadlines as comments filed in this proceeding, but they must have a separate and distinct heading designating them as responses to the IRFA.

B. Paperwork Reduction Analysis

102. This Notice of Proposed Rulemaking contains either a proposed or modified information collection. As part of its continuing effort to reduce paperwork burdens, the Commission invites the general public to take this opportunity to comment on the information collections contained in the Notice of Proposed Rulemaking as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Public and Agency comments on the information collections contained in the Notice of Proposed Rulemaking are due 60 days after publication of the summary of the Notice of Proposed Rulemaking in the Federal Register. These comments should be submitted to Les Smith, Federal Communications Commission, Room 1-A804, 445 12th Street, S.W., Washington, D.C. 20554, or via the Internet to lesmith@fcc.gov. Comments on the information collections contained in the Notice of Proposed Rulemaking should address: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

C. Ex Parte Presentations

103. For purposes of this permit-but-disclose notice and comment rulemaking proceeding, members of the public are advised that *ex parte* presentations are permitted, except during the "Sunshine Agenda" period, provided they are disclosed under the Commission's Rules.²⁰²

D. Pleading Dates

104. Pursuant to Sections 1.415 and 1.419 of the Commission's Rules,²⁰³ interested parties may file comments on or before **July 19, 1999**, and reply comments on or before **August 13, 1999**. Comments and reply comments should be filed in WT Docket No. 99-168. All relevant and timely comments will be considered by the Commission before final action is taken in this proceeding. To file formally, interested parties must file an original and four copies of all comments, reply comments, and supporting comments. If interested parties want each Commissioner to receive a personal copy of their comments, they must file an original plus nine copies. Interested parties should send comments and reply comments to the Office of the

²⁰² See generally 47 C.F.R. §§ 1.1202, 1.1203, 1.1206(a).

²⁰³ 47 C.F.R. §§ 1.415, 1.419.

Secretary, Federal Communications Commission, 445 12th Street, S.W., Washington, D.C. 20554, with a copy to Stan Wiggins, Policy Division, Wireless Telecommunications Bureau, 445 12th Street, S.W., Washington, D.C. 20554. Parties are also encouraged to file a copy of all pleadings on a 3.5-inch diskette in WordPerfect 5.1 format.

105. Comments may also be filed using the Commission's Electronic Comment Filing System (ECFS).²⁰⁴ Comments filed through the ECFS can be sent as an electronic file via the Internet to <<http://www.fcc.gov/e-file/ecfs.html>>. Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and a reference to WT Docket No. 99-168. Parties may also submit an electronic comment by Internet E-Mail. To obtain filing instructions for E-Mail comments, commenters should send an e-mail to ecfs@fcc.gov, and should include the following words in the body of the message, "get form <your E-Mail address>."

106. Comments and reply comments will be available for public inspection during regular business hours at the FCC Reference Center, 445 12th Street, S.W., Washington, D.C. 20554. Copies of comments and reply comments are available through the Commission's duplicating contractor: International Transcription Services, Inc., 2100 M Street, N.W., Suite 140, Washington, D.C. 20037.

E. Further Information

107. For further information concerning this rulemaking proceeding, contact Stan Wiggins or Ed Jacobs at (202) 418-1310, Policy Division, Wireless Telecommunications Bureau, Federal Communications Commission, Washington, D.C. 20554.

²⁰⁴ See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (1998).

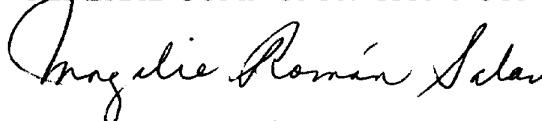
V. ORDERING CLAUSES

108. Accordingly, IT IS ORDERED that these actions ARE TAKEN pursuant to Sections 1, 4(i), 7, 10, 201, 202, 208, 214, 301, 303, 307, 308, 309(j), 309(k), 310, 311, 315, 317, 324, 331, 332 and 336 of the Communications Act of 1934, 47 U.S.C. §§ 151, 154(i), 157, 160, 201, 202, 208, 214, 301, 303, 307, 308, 309(j), 309(k), 310, 311, 315, 317, 324, 331, 332, 336.

109. IT IS FURTHER ORDERED that NOTICE IS HEREBY GIVEN of the proposed regulatory changes described in this Notice, and that comment is sought on these proposals.

110. IT IS FURTHER ORDERED that the Commission's Office of Public Affairs, Reference Operations Division, SHALL SEND a copy of this Notice, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with Section 603(a) of the Regulatory Flexibility Act of 1980, Pub. L. No. 96-354, 94 Stat. 1164, 5 U.S.C. §§ 601-612 (1980).

FEDERAL COMMUNICATIONS COMMISSION



Magalie Roman Salas
Secretary

APPENDIX

INITIAL REGULATORY FLEXIBILITY ANALYSIS

A. Need for, and Objectives of, the Proposed Rules

This rulemaking is being initiated to adopt certain service, licensing, and competitive bidding rules for the 746-764 and 776-794 MHz segments of the 746-806 MHz band. The Congress directed the Commission, in the Balanced Budget Act of 1997, to allocate 36 megahertz of this band for commercial use, and to license that spectrum by competitive bidding. In the *Reallocation Report and Order*, the Commission reallocated 36 megahertz of this band to commercial use and determined that the potential range of commercial services would include all services permitted under the U.S. Table of Allocations -- Fixed, Mobile, and Broadcasting services. In this Notice, we propose to license the 746-764 MHz and 776-794 MHz commercial bands under a flexible framework established in Part 27 of the Commission's Rules. We expect that provisions of Part 27 will be modified to reflect the particular characteristics and circumstances of services offered through the use of spectrum on these bands. Depending on the extent and nature of provisions in the service rules that enable broadcast services, these modifications may also reference or incorporate rules in other Parts of the Commission's Rules, such as Part 73 governing broadcast services. We believe that this flexible approach will encourage new and innovative services and technologies in this band without significantly limiting the range of potential uses for this spectrum.

Our objectives for the Notice are: (1) to auction licenses for these commercial spectrum blocks as directed by the Balanced Budget Act; (2) to accommodate the introduction of new uses of spectrum and the enhancement of existing uses; (3) to implement the Section 303(y) requirement that flexible use allocations not create harmful interference or discourage investment; (4) to facilitate the awarding of licenses to entities that value them the most. The Commission seeks to develop a regulatory plan for these commercial spectrum blocks that will allow for efficient licensing and intensive use of the band, eliminate unnecessary regulatory burdens, enhance the competitive potential of the band, and provide a wide variety of radio services to the public.

B. Legal Basis for Proposed Rules

The proposed action is authorized under Sections 1, 4(i), 7, 10, 201, 202, 208, 214, 301, 303, 307, 308, 309(j), 309(k), 310, 311, 315, 317, 324, 331, 332 and 336 of the Communications Act of 1934, 47 U.S.C. §§ 151, 154(i), 157, 160, 201, 202, 208, 214, 301, 303, 307, 308, 309(j), 309(k), 311, 310, 315, 317, 324, 331, 332, 336.

C. Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply

For the purposes of this Notice, the RFA defines a "small business" to be the same as a "small business concern" under the Small Business Act,²⁰⁵ unless the Commission has developed one or more definitions that are appropriate to its activities.²⁰⁶ Under the Small Business Act, a "small business concern" is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) meets any additional criteria established by the Small Business Administration (SBA).²⁰⁷

The proposals in this Notice affect applicants who wish to provide services in the 746-764 and 776-794 MHz bands. Pursuant to 47 C.F.R. § 24.720(b), the Commission has defined "small entity" for Blocks C and F broadband PCS licensees as firms that had average gross revenues of less than \$40 million in the three previous calendar years. This regulation defining "small entity" in the context of broadband PCS auctions has been approved by the SBA.²⁰⁸ With respect to applicants for licenses in the 746-764 and 776-794 MHz bands, we propose to use the small entity definition adopted in the Broadband PCS proceeding.

The Commission, however, has not yet determined or proposed how many licenses will be awarded, nor will it know how many licensees will be small businesses until the auction is held. Even after that, the Commission will not know how many licensees will partition their license areas or disaggregate their spectrum blocks, if partitioning and disaggregation are allowed. In view of our lack of knowledge of the entities which will seek licenses in the 746-764 and 776-794 MHz bands, we therefore assume that, for purposes of our evaluations and conclusions in the IRFA, all of the prospective licenses are small entities, as that term is defined by the SBA or our proposed definitions for these bands.

We invite comment on this analysis.

²⁰⁵ 15 U.S.C. § 632.

²⁰⁶ See 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 5 U.S.C. § 632).

²⁰⁷ 15 U.S.C. § 632.

²⁰⁸ See Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, PP Docket No. 93-253, Fifth Report and Order, 9 FCC Rcd 5532, 5581-82 (para. 115)(1994).

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

Entities interested in acquiring spectrum in the 746-764 and 776-794 MHz bands will be required to submit license applications and high bidders will be required to apply for their individual licenses. The proposals under consideration in this item also include requiring commercial licenses to make showings that they are in compliance with construction requirements, file applications for license renewals, and make certain other filings as required by the Communications Act and Commission regulations. In addition to the general licensing requirements of Part 27 of the Commission's Rules, other parts may be applicable to commercial licensees, depending on the nature of service provided. For example, commercial licensees proposing to provide broadcast services on these bands may be required to comply with all or part of the broadcast-specific regulations in Part 73 of the Commission's Rules. We request comment on how these requirements can be modified to reduce the burden on small entities and still meet the objectives of the proceeding.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

We have reduced burdens wherever possible. With specific regard to the potential for use of these bands by dissimilar services such as broadcast and commercial fixed and mobile, we have sought comment on different approaches to minimizing the burdens of interference management, consistent with the statutory mandate to protect both public safety uses and television service. To minimize any negative impact, we have also proposed certain incentives for small entities which will redound to their benefit. These provisions include partitioning and spectrum disaggregation. We have also sought comment on combinatorial auction procedures, which may enable small entities to participate in the licensing process with more flexibility. The regulatory burdens we have retained, such as filing applications on appropriate forms, are necessary in order to ensure that the public receives the benefits of innovative new services, or enhanced existing services, in a prompt and efficient manner. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing any significant economic impact on small entities. We seek comment on significant alternatives commenters believe we should adopt.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

None.